

What is claimed is:

- 2           1. A solar control film comprising:
  - 3               a) an adhesive layer for adhering the solar control film to a
  - 4               substrate;
  - 5               b) a metallized layer; and
  - 6               c) a scratch resistant layer containing dispersed carbon black
- 7               particles wherein the metallized layer is between the adhesive layer for adhering to a
- 8               substrate and the scratch resistant layer.
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- 10              2. The solar control film of claim 1 wherein the adhesive layer comprises a
- 11               pressure sensitive adhesive.
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- 13              3. The solar control film of claim 1 wherein the adhesive layer comprises a
- 14               dry adhesive.
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- 16              4. The solar control film of claim 1 wherein a releasable liner is present on
- 17               the adhesive layer.
- 18
- 19              5. The solar control film of claim 1 wherein the metallized layer is
- 20               comprised of aluminum deposited on a polymeric substrate.

1           6. The solar control film of claim 5 wherein the polymeric substrate  
2 comprises polyethylene terephthalate.

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4           7. The solar control film of claim 1 wherein the scratch resistant layer  
5 comprises from about 1 to about 10% by weight of the carbon black particles.

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7           8. The solar control film of claim 1 wherein the scratch resistant coating  
8 comprises from about 2 to about 3% by weight of the carbon black particles.

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10         9. The solar control film of claim 1 wherein the carbon black particles have  
11 an average particle size in the range of from about 0.2 to about 5.0 microns.

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13         10. The solar control film of claim 1 wherein the carbon black particles have  
14 an average particle size in the range of from about 0.2 to about 0.5 microns.

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16         11. The solar control film of claim 1 wherein the scratch resistant layer  
17 comprises an acrylic resin.

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19         12. The solar control film of claim 11 wherein the acrylic resin is prepared  
20 from a mixture of pentaerythritol triacrylate ester and pentaerythritol tetraacrylate  
21 ester.

1           13. The solar control film of claim 1 wherein the acrylic resin is prepared  
2 from pentaerythritol tetraacrylate ester, pentaerythritol triacrylate ester and an acrylated  
3 epoxy compound.

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5           14. The solar control film of claim 1 wherein the scratch resistant layer has a  
6 thickness in the range of from about 0.5 to about 3.0 microns.

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9           15. The solar control film of claim 1 wherein the scratch resistant layer has a  
10 thickness in the range of from about 0.8 to about 1.8 microns.

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13           16. The solar control film of claim 1 wherein the solar control film has a  
14 visible light transmittance of from about 10% to about 80% and a visible light  
15 reflection of from about 0% to about 8%.

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18           17. The solar control film of claim 1 wherein the solar control film has a  
19 haze of less than about 7%.

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22           18. The solar control film of claim 1 further comprising a polymeric film  
23 between the adhesive layer and the metallized layer.

1           19. The solar control film of claim 18 wherein the polymeric film is  
2 composed of polyethylene ethylene terephthalate.

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4           20. The solar control film of claim 19 wherein the polymeric film includes  
5 an ultraviolet absorbent.

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7           21. The solar control film of claim 18 comprising a plurality of metallized  
8 layers.

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10          22. The solar control film of claim 21 wherein a polymeric film is located  
11 between adjacent metallized layers.

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13          23. A process for preparing a solar control film comprising mixing a  
14 composition comprised of carbon black in particulate form dispersed in a nitrocellulose  
15 resin with a polymer forming material to form a coating composition and applying the  
16 coating composition to a component of a solar control film comprised of an adhesive  
17 layer for adhering the solar control film to a substrate and a metallized layer whereby  
18 the coating composition forms a scratch resistant layer containing dispersed carbon  
19 black particles.

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21          24. The process of claim 23 wherein the pigment is carbon black.

1           25. The process of claim 23 wherein the polymer forming material is a  
2 mixture of pentaerythritol acrylate ester and acrylated epoxy compound.  
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4           26. The process of claim 25 wherein the pentaerythritol acrylate ester  
5 comprises a mixture of pentaerythritol triacrylate ester and pentaerythritol tetraacrylate  
6 ester.

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8           27. The process of claim 23 wherein the composition comprised of a  
9 pigment in particulate form dispersed in a nitrocellulose resin is mixed with the  
10 polymer forming material in an amount of from about 35 to about 50% by weight of  
11 the polymer forming material.

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13           28. The process of claim 23 wherein the composition comprised of a  
14 pigment in particulate form dispersed in a nitrocellulose resin is mixed with the  
15 polymer forming material in an amount of from about 35 to about 45% by weight of  
16 the polymer forming material.

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18           29. The process of claim 23 wherein the carbon black dispersed in a  
19 nitrocellulose resin is first mixed with a portion of materials forming an acrylic resin  
20 and the resulting mixture is combined with a separate mixture containing a remaining  
21 portion of materials forming the acrylic resin.